Feniex University
feniexuniversity.com

FUSIONGPL
GENERATION PERFECTION LIGHTBAR

FUSION 44" LIGHTBAR
FN-4420

Feniex

SAFETY REGULATIONS & WARRANTY

Safety Regulations

The following provides all the information necessary to safely operate the previously listed products of Feniex Industries, Inc. Please read this manual thoroughly before installing or operating your new product in order to prevent any damage or injury. Failure to follow the listed instructions in this manual may result in damage to your products or personal injury.

- Proper installation of this product requires good knowledge of automotive systems, electronics and procedures.
- Please guarantee all vital components of the vehicle are not in danger of being damaged by drilling holes necessary for installation. Check all sides of the mounting surface before drilling any holes into the vehicle.
- Do not install this product in any way that interferes with the deployment of the air bag. Doing so may damage the effectiveness of the air bag and can lead to serious personal and vehicle injury. The installer will assume full responsibility of proper installation of the new unit.
- Please clean the mounting surface before installation of the unit when using tape, brackets, magnet, Velcro or suction cups.
- The product's ground wire must be connected directly to the Negative (-) battery post for effective use of the unit. Please follow all wiring guidelines provided to guarantee long lifespan and productivity. Failing to follow these instructions may result in damage to the product.

Warranty

Feniex Industries' speakers, sirens, rocker panels, AM600 Beacons, Torch Lights, AI lightbars, AI Cubes, AM900 Work Lights and controllers are warrantied for 2 years from the manufacturing date. In addition, all other products are warrantied for 5 years from the manufacturing date.

If a warranty problem occurs, please contact customer support at 1.800.615.8350 or visit the web site at www.Feniex.com. If the product needs to be returned for repair or replacement, call our customer support line to receive a return merchandise authorization number.

Operational times are from 10 a.m. to 5 p.m. central time, Monday through Friday. Please do not send in product without contacting support first for a RMA number.

Service After Expiration

Feniex Industries will still provide service for all products after expiration of the warranty. For any issues, call the customer support line. In some instances it may be necessary for the product to be shipped, freight prepaid and insured for loss or damage to Feniex headquarters.

Warning! Utilizing non-factory screws and mounting brackets may result in loss of warranty coverage.

Copyright

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Feniex Product Copyrights

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EQUIPMENT DIMENSIONS

12.13"

44.5"

1.75"

3.65"
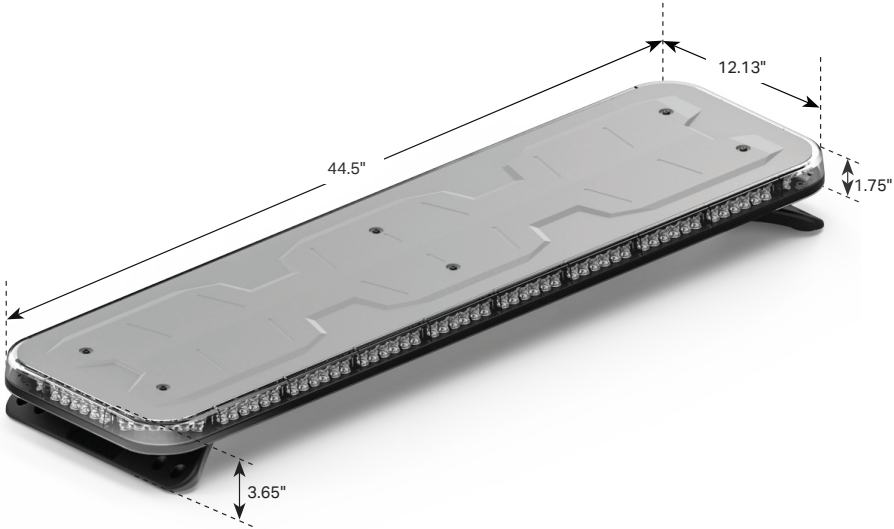
⬛ SPECIFICATIONS

Warranty	5 years
Voltage	10-18 Volts DC
Current Draw	15 Amps
Input Power	12 VDC
External Fuse	125% of Circuit Load
SAE Certificate	Class 1, J595, CT13, J1113-11
Colors	Amber, Red, Blue, White & Green

20A Fuse
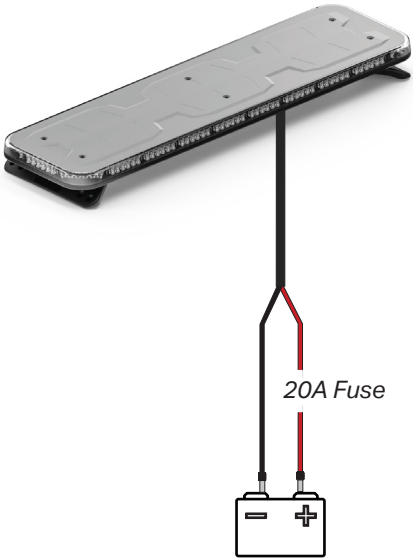
◢ FLASH PATTERNS

CRUISE PATTERNS

Activate Cruise Mode by extending the green wire to a 12v (+) latching switch.

1. Apply 12v (+) to the green wire.
2. Apply 12v (+) (momentary) to the red/white wire to advance the pattern of the cruise mode.

1	All-On
2	Single Slow
3	Single Fast
4	Single Slow - Alternating
5	Single Fast - Alternating
6	Single Slow Corners - Alter.
7	Single Fast Corners - Alter.
8	Attack Pattern

FLOOD PATTERNS

Activate Flood Mode by extending the green/black wire to a 12v (+) latching switch.

To activate flood mode, use the red/white pattern change wire to select the desired flood mode.

1	Front Modules
2	Front & Side Modules (no alley)
3	Front, Side (no alley), & Rear/Arrow Modules
4	Side & Rear/Arrow Modules
5	Rear/Arrow Modules

FLASH PATTERNS

1	Cluster Pattern
2	Attack Pattern
3	Night Ride Pattern
4	Half-Half [Slow]
5	Half-Half [Fast]
6	One-One [Slow]
7	One-One [Fast]
8	Two-Two [Slow]
9	Two-Two [Fast]
10	All-On [Fast]
11	All-On [Slow]
12	In-Out [Slow]
13	In-Out [Fast]
14	Combo: All Slow
15	Combo: All Fast
16	Combo: Fast & Slow

*Single & Dual Color Modes

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◢ WIRING DIAGRAMS

▮ Green/White	Mode 0 Rear	12V+	Activates rear-facing modules, corners & sides
▮ Blue/White	Mode 0 Front	12V+	Activates front-facing modules & corners
▮ Black	Mode 1	12V-	Warning Mode 1. *Overrides Mode 0*
▮ Red	Mode 2	12V+	Warning Mode 2. *Overrides Mode 0 & 1*
▮ Orange	Mode 3	12V+	Warning Mode 3. *Overrides Mode 0, 1 & 2*
▮ Green	Cruise Mode	12V+	Corner Modules. *10% Brightness*
▮ Blue	Takedown	12V+	Overrides Modules 1, 2 & 3 Flash Patterns
▮ Red/Black	Left Alley	12V+	Steady Burn. *Overrides Flashing*
▯ White	Right Alley	12V+	Steady Burn. *Overrides Flashing*
▮ Orange/Black	Flashing TD/Alley	12V+	Flashes Takedown & Alley Lights
▮ Green/Black	Flood Mode	12V+	Activates Flood Mode.
▮ Blue/Black	Dim	12V+	Dims Lightbar. Takedown, Alley & Flood Unaffected
▮ White/Black	Arrow Left	12V+	Left Arrow. *Overrides Flashing*
▮ Black/White	Arrow Right	12V+	Right Arrow. *Overrides Flashing*
▮ W/B + ▮ B/W	Center Out	12V+	Center-Out Arrow. *Overrides Flashing*
▮ Red/White	Pattern Changer	12V+	Momentary, cycles through

DIM MODE

Activate the flash mode by applying the flashmode wire to a 12V(+). Activate Dim Mode by extending the blue/black wire to a 12v (+). Tap the pattern changer, red/white wire to cycle through the dim modes.

⚠ ATTENTION:

Dim Mode is only available on hard-wire models. This mode will dim all modes except for Takedown functions & Flood Mode.

◢ WIRING INFORMATION & FUNCTIONS

POWER CABLE WIRING

1. Install a customer supplied fuse rated for 125% of the circuit load to the end of the red wire. Do not use a circuit breaker or fusible link.

2. Connect the opposite end of the fuse to the 12v+ terminal of the battery. Do not use more than 1 foot of wire between the fuse and the battery terminal to ensure appropriate protection.

3. Connect the black wire to the vehicle chassis ground.

4. Connect the function wires to switches, depending on the functions needed for applications (See page 6 for wiring diagrams).

■ Black	Ground	12V-	Connect to vehicle's negative battery post
■ Red	Positive	12V+	Connect to vehicle's positive battery post

⚠ ATTENTION:

All user supplied wires connecting to 12v (+) or 12v (-) must be sized to supply 100% of the maximum current and properly fused at the power source with a fuse rated at 125% of the total circuit load.

Avoid routing wires in the deployment area of the vehicle air bag or any other potentially hazardous locations.

STOP|TAIL|TURN & WORK LIGHTS

Work Light and Stop/Tail/Turn functionality must be specified at time of order. Modules in work light and/or STT positions will only function as such.

No warning patterns will be displayed in work light or STT positions.

■ Orange	Tail Lights	12V+	Steady Burn of both tail lights. *10% Brightness*
■ Red	Work Lights	12V+	Steady Burn
■ Green	Left Brake/Turn	12V+	Overrides Tail Light
■ Blue/Black	Right Brake/Turn	12V+	Overrides Tail Light

◢ WIRING INFORMATION & FUNCTIONS

TAKEDOWN

Activate the factory configured takedown function by extending the white wire to a 12v (+) latching switch.

ALLEY LIGHTS

Activate the factory configured alley lights by extending the red/black & white wires to 12v (+) latching switches.

TAKEDOWN & ALLEY FLASHING

Activate the factory configured takedown flashing function by extending the green wire to a 12v (+) latching switch. For dual color models, warning mode 2 will be activated instead of the flashing takedown function.

⚠ ATTENTION:

Takedown & alley functionality must be specified at time of order. Modules in takedown and/or alley positions will only function as such, or flashing takedown/alley. No warning patterns will be displayed in takedown or alley positions.

WARNING MODES

Warning modes 0 and 1 can be configured to use either the front or rear without activating the full lightbar. Modes 2 and 3 can only be programmed to have the full bar on or off.

- **Programming Mode 0:** Activate the mode by extending the blue/white (front wire) or the green/white (rear wire) to a 12v (+) source. The front and rear can be used together only if the same flash pattern is selected.

- **Programming Mode 1:** Activate the mode by extending the blue/white (front wire) or the green/white (rear wire) to a 12v (+) source. Overrides Mode 0. Mode 0 needs to be activated for Mode 1 to function.

- **Programming Mode 2 & 3:** Activate the mode by extending the mode wire to a 12v (+) source. Mode 2 overrides Modes 0 and 1. Mode 3 overrides Modes 0, 1 and 2.

ARROW FUNCTIONS

Activate the arrow functions by extending the white/black wire, black/white wire, or a combination of both to 12v (+) latching switches.

⚠ ATTENTION:

Arrow functions will override all warning modes on all rear-facing modules (not including corners).
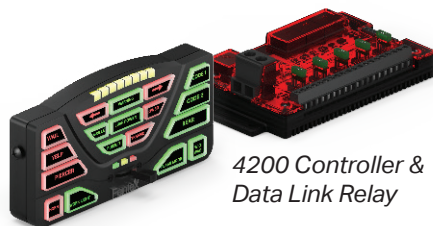
4200 DATA LINK CONTROLLER

When using the data link, connect the RJ45 connection to the 4200 Relay. Use the 4200 Software to program the desired function of the Fusion 44" Lightbar.

⚠ ATTENTION:

When the RJ45 Data Link wire is connected to the 4200 Relay, this will override any other wire input to the Fusion 44" Lightbar. You can either use Data Link or the Lightbar wire harness, but not both.

4200 Controller & Data Link Relay
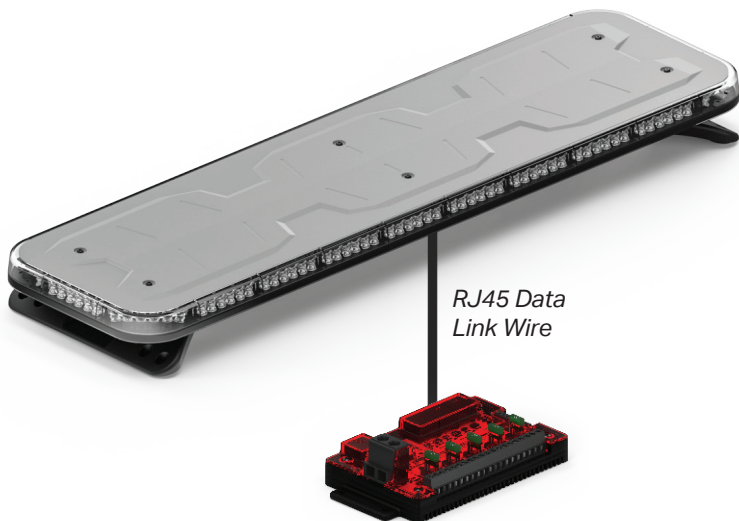
RJ45 Data Link Wire

◢ HOOK KIT INSTRUCTIONS

INSTALLING A HOOK BRACKET

1. Remove the hex bolt from its packaging and slide the bolt through the hook bracket hole.

2. Using a socket wrench and the hex bolt, loosely secure the hook bracket to the threaded hole in the foot bracket. Repeat on the other side of the lightbar so both sides have the hook bracket secured.

3. Place the lightbar with the attached hook brackets on the vehicle. Ensure the hook bracket is up right and seated correctly.

4. Secure and tighten the bracket using a socket wrench on each side of the vehicle until the bar is snugly mounted. Use the included lock nut as a jam nut for extra security. Ensure the vehicle's door will close without any interference.

⚠ ATTENTION:

Do not overtighten the hex bolts. Do not exceed 165 in. lb. The use of blue thread locker is suggested.

5. Drill and secure the bracket to the vehicle with self-tapping screws, using the two pilot holes on the bottom of the hook bracket as a guide.

6. Once the bar is secure, drill a one inch hole to route the wire harness through the vehicle and then seal the hole with silicone. Ensure that wires are protected from rough edges using a rubber wire grommet.

⚠ ATTENTION:

Utilizing non-factory hardware and mounting brackets may result in loss of warranty.

Hex Bolt

Hook Bracket

Foot Bracket